

Third-Grade Student Success on
FCAT after *Voyager Passport*[™]
Reading Intervention in
the School District of
Manatee County



Third-Grade Students Success on FCAT after Voyager Passport™ Reading Intervention in the School District of Manatee County Florida

ABSTRACT

This study investigated the program effects of *Voyager Passport*™ on the reading achievement and *FCAT* passing rate of third grade students in the School District of Manatee County who used this product as part of the reading intervention during the 2006-2007 school year. This study used a pretest posttest quasi-experimental design. The study participants included 713 grade 3 students at 32 schools. Student growth was measured using oral reading fluency, as measured by the DIBELS™ Oral Reading Fluency assessment and *FCAT* scores. Struggling students who participated in *Voyager Passport* showed significant gains in oral reading fluency.

INTRODUCTION

Many studies have shown a strong correlation between reading fluency and reading achievement. Drs. Julie Buck and Joseph Torgesen explain the relationship between oral reading fluency and performance on the *FCAT* in their oft cited study: *The Relationship Between Performance on a Measure of Oral Reading Fluency and Performance on the Florida Comprehensive Assessment Test*. Ninety-one percent of the students with ORF scores of 110 words correct per minute or higher also attained achievement level 3 or higher on the *FCAT*-SSS test. Students at *FCAT*-SSS achievement level 3 or higher are considered to be at or above their grade level in reading. They further note the strong correlation between the students' ORF scores and the *FCAT*-SSS comprehension scores, with validity coefficient of 0.70.

Oral Reading Fluency is the key to predicting which students will achieve grade-level reading. Several studies show that more than 80% of students who can read third-grade level text at a rate of 110 words per minute pass the high-stakes state reading assessments.

Current research converges on the certainty that few students acquire reading naturally, and that most students benefit from explicit and direct, structured instruction (National Reading Panel, 2000). This research, based on sound, scientific observations and analyses, provides evidence for not only what instruction works, but why and how it works (Reyna, 2004). Those students who struggle learning to read are served as well in small groups of three to four students as they are individually (Torgesen, 2004; Vaughn & Linan-Thompson, 2003).

An intense focus of instruction as of late has been on improving reading proficiency of students and providing intervention for those students who struggle with learning to read adequately. The School District of

Manatee County chose to provide reading intervention with *Voyager Passport* to target the need of many of their third grade students who were at risk for failure on the *FCAT* and thereby not eligible for promotion to the fourth grade. Although many children will have difficulty learning to read, regardless of their core reading program, they cannot simply be left to fall behind. Research has provided the knowledge and tools teachers need to ensure every student becomes a successful reader (Shaywitz, 2003).

METHODS

Participants

During the 2006-07 school year, 713 students in the third grade at 32 schools in the School District of Manatee County in Florida used the *Voyager Passport* program as a supplemental reading intervention. Most students (76%) began the program in August through October, while another 24% started in January. Approximately 6% of the students were repeating the third grade.

Implementation

Manatee implemented an in-school, pull out model for the reading intervention. Lessons were to be delivered to students five days a week for 30 minutes per day. The teachers were responsible for the testing of the students and for placing the assessment scores into the PMRN data system. Voyager support persons facilitated the transfer of student data to VPORT®, the Voyager data management system.

Materials

Voyager Passport provides direct, systematic instruction in each of the essential reading components and is designed as an intervention program for students for whom the core reading program is not sufficient. The lessons are based on the scientific knowledge about effective reading instruction. The lessons address decoding strategies, fluency, and comprehension. Each

student receives a set of individual instructional materials for the duration of the program.

Phonemic Awareness: To make the greatest gains in reading, students must learn to blend and segment individual sounds in words. Student gains in reading and spelling are strongest when print is integrated with phonemic awareness instruction (Hatcher, Hulme, & Ellis, 1994). For third grade students, the phonemic activities are integrated into the phonics and spelling lessons where students can apply knowledge of the alphabetic principle and coordinate orthographic, phonemic, and graphemic knowledge.

Phonics: Phonics instruction is the systematic use of sound-symbol relationships to teach the reading and writing of words. *Voyager Passport* utilized the extensive research base in phonics to develop systematic and explicit phonics and spelling lessons, shown to be the most effective way to ensure appropriate reading growth (National Reading Panel, 2000). The instruction builds in difficulty incorporating letter combinations, affixes, and strategies for decoding multisyllabic words. Words with irregular spelling patterns are also taught explicitly with extensive review.

Fluency: Fluency is the ability to accurately and quickly read text. Fluent reading allows readers to focus on comprehending and gaining meaning from text. Fluency instruction in *Voyager Passport* provides specific time for practicing reading and rereading text accurately, efficiently, and with expression. Once students can read connected text, repeated reading with feedback is an effective practice for improving fluency and reading achievement (Chard, Vaughn, & Tyler, 2002; Homan, Klesius, & Hite, 1993; National Reading Panel, 2000). As students develop more advanced reading skills, fluency lessons focus on text-level reading with teachers modeling appropriate reading rates and expression. Strategies for chunking text are also explicitly taught and timed readings motivate and challenge students to improve their reading rates.

Vocabulary: Vocabulary refers to the words a person understands and uses in listening, speaking, reading, and writing. Students learn word meanings through direct and indirect experiences with oral and printed language (Beck, McKeown, & Kucan, 2002; National Reading Panel, 2000). *Voyager Passport* addresses vocabulary instruction through a sequence of word introduction, with read-alouds, student passage reading, comprehension activities, and text discussions. The design allows repeated exposure to new vocabulary in a variety of contexts using oral and written language.

Comprehension: Comprehension is the ability to understand and gain meaning from language. Snow,

Burns, and Griffin (1998) assert that the student needs both background knowledge and conceptual sophistication to understand the meaning of a word or text. Students extract meaning as well as construct meaning as they build representations and gain new meaning (Snow & Sweet, 2003). *Voyager Passport* teaches strategies for understanding text, including teaching students to monitor their comprehension, organizing and retelling information presented, recognizing story structure, generating questions about the text, predicting outcomes in the text, and confirming or revising predictions (National Reading Panel, 2000; Pressley & Wharton-McDonald, 1997; Rosenshine, Meister, & Chapman, 1996).

Assessments

Students received both the Florida state test and DIBELS (Dynamic Indicators of Basic Early Literacy Skills) assessments. The DIBELS scores were entered into the PMRN system and then transferred to the Voyager VPORT system, from where the rest of the reporting takes place. As a result of this, the nomenclature of the VIP measures will be used and discussed in this report.

Voyager Passport provides Vital Indicators of Progress (VIP[®]) measures developed by Dr. Roland Good and colleagues at the University of Oregon which are one-minute individually-administered fluency indicators to monitor growth in *Voyager* Reading Programs and are completely equivalent to DIBELS[™]. Reliability and validity of DIBELS are established for each subtest and grade. Alternate form reliability measures ranged from .62 to .93. Predictive and criterion validity were established with the Woodcock-Johnson, concurrent validity was established with the Stanford Binet, Woodcock-Johnson, CBMR, and Test of Reading Fluency (TORF) (University of Oregon, 2002).

The cutoffs and goals are based on finding a point where the odds would be in favor (at least 80%) of the student achieving subsequent literacy outcomes as developed by the DIBELS[™] Benchmarks (Good, Simmons, Kame'enui, Kaminski, & Wallin, 2002). Results for the VIP benchmarks identify if a student is a struggling, an emerging, or an on-track reader.

The RCT measure (Reading Connected Text) is a standardized, individually administered test of reading fluency with connected text for students in grades 1 through 5 and above. RCT is a set of equivalent passages and administration procedures designed to identify students who may need additional instructional support, and to monitor progress toward instructional goals.

Student performance is measured by having students read a passage aloud for one minute. Words omitted, substituted, and hesitations of more than three seconds

are scored as errors. Words self-corrected within three seconds are scored as accurate. The number of correct words per minute from the passages is the oral reading fluency rate which is reported as the “RCT score.” The tool provides information on student performance in English.

Typically the DIBELS™ (Dynamic Indicators of Basic Early Literacy Skills) goals are used with the VIP® fluency measures based on time of year (Good, Simmons, Kame’enui, Kaminski, & Wallin, 2002). The Hasbrouck and Tindal Oral Reading Fluency Norms (2006) are mentioned as a point of reference for oral reading fluency where appropriate. The DIBELS/VIP passages however are standardized passages based on end of grade level reading targets and calibrated across nine readability formulas. Hasbrouck and Tindal Norms were developed using data collected from real teachers across the nation using the text they selected individually perceived as grade level text. In both cases the samples for the norms are quite substantial and provide valuable and reliable reference points for oral reading fluency. For the purposes of this study, the end of year DIBELS goal of 110 words per minute is used.

FCAT. Students in the School District of Manatee County in Florida were given *Florida’s Comprehensive Assessment Test (FCAT)* in the spring 2007 to evaluate their progress on the Sunshine State Standards (SSS) in reading. The reliability of the FCAT was determined through internal consistency reliability and Item Response Theory (IRT) marginal reliabilities by grade. Cronbach’s alpha ranged from .88 to .91. KR-20 reliability coefficients ranged from .92 to .94. IRT marginal reliabilities ranged from .88 to .91. The content validity is substantiated through the *FCAT*’s development based on the SSS in reading. Criterion-related validity was based on the correlation of *FCAT* scores with the Stanford 9. Correlations ranged from .78 to .85 (Florida Department of Education, 2003).

Scores include a scale score ranging from 1-500 and an Achievement Level, defined below.

Table 1. FCAT achievement level definitions (Florida Department of Education, 2008)

Level	Achievement Level Policy Definitions
5	Success with the most challenging content. A student scoring in Level 5 answers most of the test questions correctly, including the most challenging questions.
4	Success with challenging content. A student scoring in Level 4 answers most of the test questions correctly, but may have only some success with questions that reflect the most challenging content.
3	Partial success with challenging content, but performance is inconsistent. A student scoring in Level 3 answers many of the test questions correctly but is generally less successful with questions that are the most challenging.
2	Limited success with challenging content.
1	Little success with challenging content.

Data Gathering and Analysis

Almost all students had 2007 *FCAT* scores, while 100% of Passport students and 14% of control students had RCT scores for three benchmark periods. An RCT gain score was computed by subtracting the first Benchmark RCT from the third Benchmark RCT. All analyses used a .05 criterion for identifying statistical significance.

Analysis of variance was used to assess differences in RCT gain based on Benchmark status categories and program participation. Eta-square (η^2) was used to consider effect size.

RESULTS

Participation Level

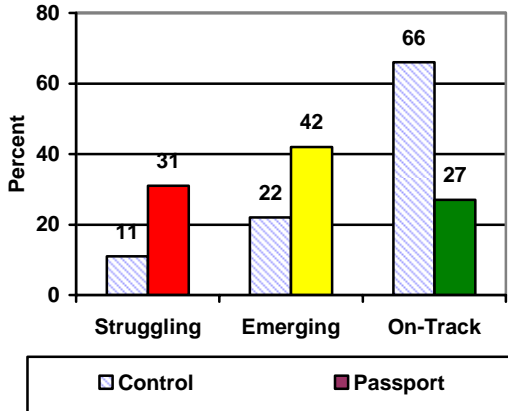
During the 2006-07 school year, 713 grade 3 students at 32 schools in the Manatee County School District in Florida used the Passport program in a pull-out setting. Most students began the program in August through October, while others started in January. Approximately 12% of the students were repeating the third grade.

Data were available for another 2,283 students who did not use *Voyager Passport*, but still had *FCAT* scores. These students can be thought of as a control or comparison group.

Assessment Results

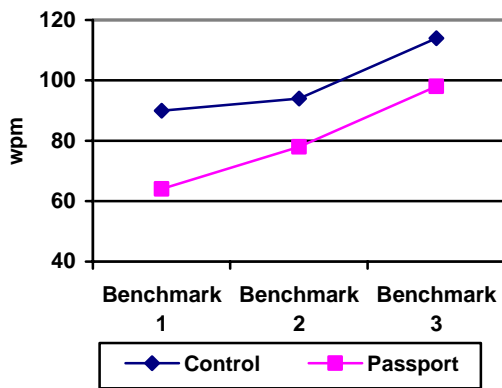
Participants. At the first Benchmark, greater percentages of struggling and emerging students were participating in Passport than in the control group (Figure 1).

Figure 1. Reading status categories for Benchmark 1 by Passport participation.



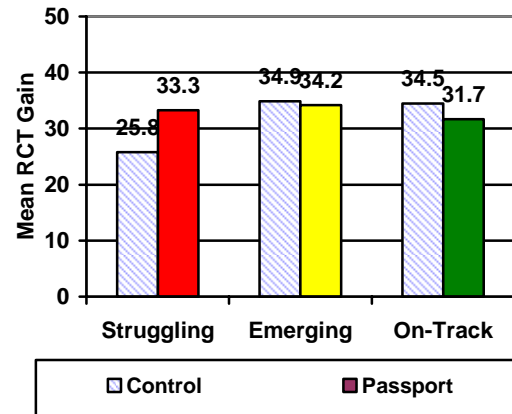
RCT scores. Although fluency rates for Passport student remained below the control students' rates, Passport students made greater consistent gains across the three Benchmark periods (Figure 2).

Figure 2. Mean RCT scores at each Benchmark by Passport participation.



RCT gain scores. There was a significant interaction between Benchmark 1 reading status (Struggling, Emerging or On-Track) and program participation [$F(2, 1040) = 7.412, p = .001, \eta^2 = .014$] related to RCT gain scores. Passport students with a Benchmark 1 status of struggling made significantly greater gains than their counterparts in the control group (Figure 3).

Figure 3. Mean RCT gain from Benchmark 1 to 3 by Benchmark 1 reading status and Passport participation.



DISCUSSION

Studies such as these based on real-world practices of implementation of standard-protocol interventions with teachers using it as they actually would without researcher involvement have a lot to tell us. We learn that teachers can in fact implement a program and produce positive growth for students in typical settings, without the influence often inadvertently exerted by researchers.

Greater oral reading fluency is indicative of more practice reading. Fluency is defined by three constructs, quick and accurate word recognition, appropriate use of prosody and in many cases comprehension (Kuhn & Stahl, 2003). More experience with text provides opportunities to learn about a wider range of topics, build automaticity with printed words, and demonstrate greater comprehension as a result of increased content exposure.

When students read more, they become more proficient with reading and thereby have higher fluency rates. Teachers were able to use *Voyager Passport* during the school day for an additional 30 minutes targeting struggling students which afforded an opportunity for students who needed additional reading instruction beyond the core to receive instruction in reading skills paired with accessible level text. As demonstrated by the analysis, every additional word per minute a student read translated to a .67 increase on the *FCAT*.

CONCLUSION

Students made positive growth in oral reading fluency during the *Voyager Passport* reading intervention as illustrated by the statistically significant results for the struggling students from Manatee County. Growth in fluency transfers to greater success on high-stakes measures such as the *FCAT*. Because oral reading fluency as measured by RCT is a significant predictor of *FCAT* scale scores, the focus of improving reading

proficiency and measuring fluency with progress monitoring will enable educators to best predict which students need additional support to reach subsequent literacy goals.

REFERENCES

- Beck, I.L., McKeown, M.G., & Kucan, L. (2002). *Bringing words to life: Robust vocabulary instruction*. New York: The Guilford Press.
- Chard, D.J., Vaughn, S., & Tyler, B.J. (2002). A synthesis of research on effective interventions for building reading fluency with elementary students with learning disabilities. *Journal of Learning Disabilities, 35*, 386-406.
- Florida Department of Education (2003). *Assessment and accountability briefing book: FCAT, school accountability, teacher certification tests*. Accessed at <http://feat.fldoe.org/pdf/fcataabb.pdf>, October 6, 2008.
- Good, R.H., Simmons, D.C., & Kame'enui, E. (2001). The importance and decision making utility of a continuum of fluency-based indicators of foundational reading skills for third-grade high-stakes outcomes. *Scientific Studies of Reading, 5*, 257-288.
- Good, R. H., Simmons, D., Kame'enui, E., Kaminski, R. A., & Wallin, J. (2002). *Summary of decision rules for intensive, strategic, and benchmark instructional recommendations in kindergarten through third grade* (Technical Report No. 11). Eugene, OR: University of Oregon.
- Hatcher, P.J., Hulme, C., & Ellis, A.W. (1994). Ameliorating early reading failure by integrating the teaching of reading and phonological skills: The phonological linkage hypothesis. *Child Development, 65*, 41-57.
- Hasbrouck, J., and Tindal, G. A. (2006). Oral reading fluency norms: A valuable assessment tool for reading teachers. *The Reading Teacher, 59*(7), 636-644.
- Henry, M. K. (2003). *Unlocking literacy: Effective decoding and spelling instruction*. Baltimore: Paul H. Brookes Publishing Co.
- Homan, S.P., Klesius, J.P., & Hite, C. (1993). Effects of repeated readings and nonrepetitive strategies on students' fluency and comprehension. *Journal of Educational Research, 87*, 94-100.
- Good, R.H., Simmons, D., Kame'enui, E., Kaminski, R.A., & Wallin, J. (2002). *Summary of decision rules for intensive, strategic, and benchmark instructional recommendations in kindergarten through third grade* (Technical Report No. 11). Eugene, OR: University of Oregon.
- National Reading Panel. (2000). *Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction* (NIH Publication No. 00-4754). Washington, DC: U.S. Government Printing Office.
- Pressley, M., & Wharton-McDonald, R. (1997). Skilled comprehension and its development through instruction. *School Psychology Review, 26*, 448-466.
- Reyna, V.F. (2004). Why scientific research? The importance of evidence in changing educational practice. In P. McCardle & V. Chhabra (Eds.), *The voice of evidence in reading research* (pp. 47-58). Baltimore: Paul H. Brookes Publishing Co.
- Rosenshine, B., Meister, C., & Chapman, S. (1996). Teaching students to generate questions: A review of the intervention studies. *Review of Educational Research, 66*, 181-221.
- Shaywitz, S. (2003). *Overcoming dyslexia*. New York: Alfred A. Knopf.
- Snow, C.E., Burns, M.S., & Griffin, P. (1998). (Eds.). *Preventing reading difficulties in young children*. Washington, DC: National Academy Press.
- Snow, C.E., & Sweet, A.P. (2003). Reading for comprehension. In A.P. Sweet & C.E. Snow (Eds.), *Rethinking reading comprehension* (pp. 1-11). New York: The Guilford Press.
- Torgesen, J. K., Buck, J. (2005). *The Relationship Between Performance on a Measure of Oral Reading Fluency and Performance on the Florida Comprehensive Assessment Test*, (Technical Report No. 1) Florida Center for Reading Research: Tallahassee, Florida.
- Torgesen, J. K. (2004). Lessons learned from research on interventions for students who have difficulty learning to read. In P. McCardle & V. Chhabra (Eds.), *The voice of evidence in reading research* (pp. 355-382). Baltimore: Paul H. Brookes Publishing Co.
- University of Oregon (2002). *Assessment committee: Analysis of reading assessment measures*. Accessed at https://dibels.uoregon.edu/techreports/dibels_5th_ed.pdf, October 6, 2008.
- Vaughn, S., & Linan-Thompson, S. (2003). Group size & time allotted to intervention: Effects for students with reading difficulties. In B. Foorman (Ed.), *Preventing and remediating reading difficulties: Bringing science to scale*, (pp. 299-324). Baltimore: York Press.